



Hurricane Carlotta wind analysis showing wind speed in knots



Deployment of surface drifting buoy



NOAA's P-3 Hurricane Hunters in formation

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Atlantic Oceanographic and Meteorological Laboratory

Specializing in hurricanes and open and coastal ocean research

What does the Atlantic Oceanographic and Meteorological Laboratory do for the nation?

WithWith an estimated 40 million AWith an estimated 40 million Americans IWith an euritedUnited States, it is essentialUnited States, it is essential that we understand howUnthe oceans and the role the oceanthe oceans and the role the ocean playsthe oceans a rangingranging ranging from ranging from waste water to increased levels of sisignificantly significantly affect the coastal marine ecosystems we depend on econom TheThe temperature and rate at which ocean waterThe temperature and rate at which occ climateclimate and long termclimate and long term weather patterns. The gradual north of of warm waters in the Atlantic iof warm waters in the Atlantic is strongly of warhurricane activity.

ScientistsScientists atScientists at theScientists at the Atlantic Oceanographic and Metastudystudy the relationships between ocean and study the relationships between ocean inin both nin both near shoin both near shore and open ocean environments. They dederal, federal, state, and local authorities to maximize research knowlefederal, state, economically economically and environeconomically and environmeneconomically and interinterprets oceanographic data collected via ships, satellites, drifting but floats, floats, and conducts research relevant to annual-to-decadal climate changefloats coastalcoastal ecosystems. This rescoastal ecosystems. This research coastal ecinteractioninteraction with the atmosphere, and its roleinteraction with the atmosphere, and research research improves the undresearch improves the intensityintensity change. A key to this work is the annual hurricane fielintensity of supported by tsupported by thesupported by the NOAA Aircraft Operation aircraft.

Recent Accomplishments:

- "AOMLAOML addresses the problem of rapid hurricane intensification through detaileddetailed airborne observations of the atmospheric detailed airborne observations of the atmospheric detailed airborne observations of the atmospheric detailed airborne observation oceanographic detailed, microwave oceanographic oceanographic probes. Payoffs: The forecasPayoffs: The following the skill inlimited skill in prelimited skill in predicting rapid into unremarkable unremarkable hurricanes into an engine of devastation over Timely Timely warning Timely warning of rapid Timely warning of rapid intensities the key to mitigation of the inevitable large-scale propers the key to mit and prevention of extensive mortality.
- " AOMLAOML provides real-timeAOML provides real-time analysis and display ofAO windswinds and radar images, observed by aircraft flyingwinds and radar images, issuingissuing warnings. Payoffs: Knowledge of the on-set ofPayoffs: Knowledge helpshelps emergency managers decide when to issue warnings and evacuations as well as where to anticipate the most damage.
- " AOMLAOML operates a GOOS (Global Ocean Operating SAOML operates a collectscollects uppercollects upper ocean data from a wide varietycollects upper oc toto operational forecast centers and performsto operational forecast centers and perthethe data to the data to research scientists. the data to research scientists. Payoffs

of of the climate forecast activities that have been shown to be of great economic benefit both to the nation and the international community.

- " AOMLAOML is a principal player in the NOAA/OGP CarboAOML is a principal p
- " DuringDuring the recent sewage spill in Miami, AOML provided critical offshore current meaDuring the re municipalmunicipal authorities and Health Dept. tomunicipal authorities and Health Dept. to detmunicipal measuremeasure against sewage contamination. Payoffs: Helping to prevent public health problemPayor minimize unnecessary lost revenue from beach closures, and

What s next for AOML?

AOMLAOML will conduct increasingly intAOML will conduct increasingly interdisciAOML material waterways, and tropical meteorole has a firmly established role as leader in researchhas a firmly established role as leader in AtlanticAtlantic Ocean, including theAtlantic Ocean, including the Intra-Americas Sea (Caribbean and Gulf of Mexica AOMLAOML is the custodian of major oceanographicAOML is the custodian of major In addition to continuing work, general new avenues that could be potential future projects include:

- " A model system for assisting coastal infrastructure groups in responding to infrastructure failures
- " Expanded Research in the Intra-Americas Sea
- " Southeastern US regional research covering all three AOML theme areas
- ExpandedExpanded use of Remote Sensing Technology including greater use of the Coastwatch satellite d system

Research Partnerships:

AOMLAOML has AOML has research partnerships with all components AOML has research partnerships with all components and the search partnerships with all components and several foreign research partnerships with all components and several foreign res

Budget and Staff:

AOMLAOML is a \$13.9 million laboratory (\$8.3 million in NOAA AOML is a \$13.9 million laboratory (\$8.3 r employees, 4 NOAA Corps officers, 10 contract employees and 35 university employees.

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